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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,127	09/30/2003	Ram Kishan Singh B	134390 (MHM 14929US01)	5701

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EXAMINER	
ARTMAN, THOMAS R	

ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,127	SINGH B ET AL.	
	Examiner	Art Unit	
	Thomas R. Artman	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-11,18 and 20* is/are allowed.

6)☒ Claim(s) *12-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 5,105,455) in view of Hattori (US 6,561,301 B1).

Regarding claim 12, Kato discloses a device (Figs.1-3), including:

a) a main body 5 extending from a support structure 1b, the main body having a distal end (bottom of item 5), a lower surface (bottom of item 5), and a lateral surface (side of item 5);

b) a fluid-filled L-shaped cushioned bumper (Fig.3; col.2, line 29) having a lower member integrally formed with an upper member (two extremities of the L shape), where the bumper is attached to a portion of the distal end of the main body (Figs.2-3), where the bumper conforms to the shape of the distal end of the main body where the lower member extends over the lower surface of the distal end, and the upper member extends over a lateral surface of the distal end (bottom and right sides of Fig.3, respectively).

Kato does not specifically disclose that the bumper is filled with liquid. The bumper is filled with air.

Hattori specifically teaches a cushioned bumper for collision detection between a moving object and a (future) patient that is either filled with gas or fluid (Figs.39 and 40). Hattori

teaches in col.37, lines 44-50, that an incompressible liquid is preferable depending upon the expandability of the chamber (bumper), such that the properties of the bumper as a whole are tuned to the desired mechanical properties.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Kato to use either air or liquid as a fluid in the bumper in order to properly tune the mechanical properties of the bumper as desired, as taught by Hattori.

With respect to claim 13, Kato further discloses that the imaging device has an x-ray source 4 and an x-ray detector 5.

With respect to claim 14, Kato further discloses that the imaging device is positioned on a C-arm 1 and is configured to rotate around a patient positioned in the patient positioning area (col.2, lines 18-34).

With respect to claim 15, the Kato/Hattori combination further teaches a detection system 13 (of Kato) in contact with the liquid, the detection system further having a pressure sensing device (Kato: Fig.3; col.3, lines 31-49).

With respect to claim 16, Kato/Hattori combination further discloses that there is a plurality of pressure sensing devices 13 in contact with the liquid.

With respect to claim 17, Kato further discloses:

c) a mounting frame 11 located at the distal end of the main body, where the frame has upper and lower mounting bases (vertical and horizontal sections of item 11, respectively, Fig.3),

d) a first flange attached to the upper base where at least a portion of the upper member is attached to the first flange (upper portion of item 12 sandwiched between upper base and flange of item 11; Fig.3), and

e) a second flange attached to the lower base where at least a portoin of the lower member is attahced to the second flange (lower portion of item 12 sandwiched between lower base and flange of item 11; Fig.3).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12-15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 9 and 13 of copending Application No. 10/963,329 in view of Hattori.

The claims of the instant application recite a "bumper" that is "cushioned". The claims of the conflicting application describe a "damper" that is made of an "elastic material". These are obvious variants, where an elastic material provides "cushion" upon impact with another object. Furthermore, the differences between "bumper" and "damper" are obvious variants, particularly when the additional limitations between the two applications that define these structures are the same: the "damper" and the "bumper" are both claimed to be filled with fluid and have a pressure sensor. Further still, both the "bumper" and the "damper" are intended for the same function: detect contact with another object in order to shut down the imaging system support motors in order to prevent damage.

In addition, the claims of the instant application, specifically claims 2, 7 and 12, describe an L-shaped bumper that conforms to the shape of the imaging device. The bumper has a first "lip" (or "member") that is adjacent to the main body of the imaging device, and a second "lip" (or "member") extending laterally across the lower surface of the imaging device, thus defining the L shape. Claims 1, 5 and 9 of the conflicting application describe an L-shaped damper that conforms to the shape of the imaging device, where there is an inner surface that is concave and an outer surface that is convex, thus defining the L shape.

Although the description claimed in the instant application may not be identical in scope to that of the conflicting claims, it is clear that both descriptions can, and in fact do, describe a common structure: an L-shaped device that conforms to the shape of the imaging system. The

simplest, most direct evidence of this is the fact that the same prior art, Kato, anticipates the L-shaped structures as claimed in both applications (see above rejection and the rejection in the 10/963,329 file).

The claims of conflicting application 10/963,329 do not state that the L-shaped damper is filled with liquid.

Hattori specifically teaches a cushioned bumper for collision detection between a moving object and a (future) patient that is either filled with gas or fluid (Figs.39 and 40). Hattori teaches in col.37, lines 44-50, that an incompressible liquid is preferable depending upon the expandability of the chamber (bumper), such that the properties of the bumper as a whole are tuned to the desired mechanical properties.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the damper of the conflicting application to use either air or liquid as a fluid in the bumper in order to properly tune the mechanical properties of the bumper as desired, as taught by Hattori.

This is a provisional obviousness-type double patenting rejection.

Allowable Subject Matter

Claims 1-11, 18 and 20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: claims 1 and 18 are allowed for incorporating the allowable subject matter as indicated in the previous Office action, dated September 13th, 2006.

Claims 2-11 and 20 are allowed by virtue of their dependency.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Artman whose telephone number is (571) 272-2485. The examiner can normally be reached on 9am - 5:30pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas R. Artman
Patent Examiner

EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER